# The Nervous System: A Key Player in Psoriasis?

**Eric J Yang**

#### University of California, San Francisco

An increasing amount of psoriasis treatment options have become available over the past 20 years, but treating recalcitrant disease still remains difficult. Current therapies for psoriasis include topical agents, phototherapy, systemic immunosuppression, and targeted biologic therapies. However, the nervous system’s role in psoriasis has been largely unexplored.

Stress is a commonly implicated “trigger” for psoriasis, and is associated with activation of the sympathetic nervous system. Autonomic dysfunction has been shown to play a large role in inflammatory disease, with greater sympathetic than parasympathetic tone being observed in rheumatoid arthritis, inflammatory bowel disease, and psoriatic arthritis. Various cognitive and psychological interventions, such as psychotherapy, biofeedback, hypnosis, mindfulness, meditation, and emotional disclosure have all been shown to improve physical and psychological outcomes in psoriasis. Additionally, recent animal studies and clinical trials have demonstrated that vagus nerve stimulation decreases inflammatory processes in rheumatoid arthritis and inflammatory bowel disease.

Increases in parasympathetic drive correct autonomic imbalance associated with inflammatory disease, and could potentially provide a novel treatment option for patients with “stress-responsive” psoriasis. This talk will explore the existing evidence regarding the role of the nervous system in inflammatory disease in general, and discuss how the nervous system can be used specifically for the management of psoriasis.

# Negative Psychological and Family Dynamic Effects of Atopic Dermatitis

**Kristen M. Beck, MD**

#### University of California, San Francisco

Atopic dermatitis is one of the most prominent sub-groups of the eczema family. There has been much less emphasis placed on the psychosocial negative impact of atopic dermatitis as compared to psoriasis despite similar prevalence for both disorders in the population. In this presentation, available data regarding the negative psychological impact of atopic dermatitis on the patient himself or herself will be reviewed in detail. Moreover, because atopic dermatitis starts quite early in the developmental life of the patient, it is also well-documented that a family with a child affected severely with atopic dermatitis often experiences dysfunctional family dynamics, such as resentment from siblings when the mother pays disproportionately more attention to the atopic dermatitis child than to the other children. A child with severe itching, especially at night which interferes with sleep, may even make intimate relationships between the parents difficult. This and other negative impact of AD on family dynamics will also be reviewed and discussed in detail.

# The Art of Approaching Delusional Patients

**John Koo, MD**

#### University of California, San Francisco

Delusional patients encountered in dermatological practice represent one of the most challenging situations in our specialty. It is well-known that certain medications such as Pimozide or Risperidol generally work very well for these somatic delusions. However, the greatest challenge is how to convince the patient to take these medications. Obviously, labeling them as psychotic or delusional and presenting the medication as an anti-psychotic agent will not be acceptable to these patients. The presenter plans to share an approach that he has found most useful in the largest proportion of these patients which is to empathize with the patient’s suffering and present medications in the spirit of pragmatic “trial and error.” However, the presenter is not ego-invested in this particular approach; instead, this approach will be shared simply to set the stage so the attending audience who all have experienced dealing with these patients, can contribute to the discussion on various ways we can effectively interact with delusional patients and get their agreement to try the medications.

# Trichotillomania (Hair Pulling Disorder): What is New?

**Katlein Franca, MD, MSc, PhD**

#### **University of Miami, FL, USA**

**Trichotillomania (hair pulling disorder) is a fairly common but underreported disorder characterized by recurrent episodes of pulling hair from different parts of the body. Currently classified in DSM-5 (Diagnostic and statistical manual of psychiatric disorders) under the heading of the Obsessive-compulsive spectrum and related disorders. The estimated prevalence data suggest that 0.5 to 2% of the general population suffers from this disorder. Stress and anxiety are directly co-related to the production of trichotillomania symptoms. The psychosocial aspects of trichotillomania are greatly underestimated, but recent literature suggests an increased interest in this neglected area. The Management of trichotillomania is mainly Psychotherapy. Although no FDA approved medications are available for the treatment of trichotillomania, a variety of medications including N acetylcysteine and silymarin have shown benefit in case reports. Combined liaison clinics, with an interdisciplinary approach, are highly advisable in the treatment of these cases.**

# **“Mindful vs Mindless” Manipulation of the Skin**

**Rick Fried, MD, PhD**

#### **Yardley Dermatology Institute, Yardley, PA, USA**

**Manipulation of the skin, hair, and nails is commonly encountered in dermatology and psychiatry practices. Manipulation of the integument and its appendages can be associated with pain, infection, and scarring. Anxiety, obsessive compulsive disorder, and depression are frequently reported as are impairments in psychosocial and vocational functioning. Management of these patients is often challenging since the skin, hair, and nail manipulations are performed for a variety of reasons. A conceptual framework is presented to enhance the clinician’s understanding of “why patients manipulate” and thus formulate a maximally efficacious treatment plan.**

# **PHQ-2 in Dermatology: A New Tool in Psychodermatology**

**Mohammad Jafferany, MD, FAPA**

#### **Central Michigan University**

**Approximately 30% of all dermatology patients experience a psychiatric disorder or some form of notable psychosocial morbidity. When the psychiatric concern is related to skin disease, dermatologists are in a unique position to identify the problem and help patients seek treatment. Psychodermatology is a growing field that includes both primary and secondary psychiatric conditions. Primary psychiatric conditions associated with skin findings include disorders where self-induced skin lesions result from an emotional disturbance (e.g., acne excoriée). In contrast, secondary psychiatric disorders involve emotional disturbances that manifest in response to the psychologic stress caused by the skin condition (e.g., major depression induced by severe psoriasis). We are presenting a screening measure to assess depression and suicidal ideations associated with psychodermatological diseases.**

# **The Role of Neuropeptides in the Control of Regional Immunity.**

**Torello Lotti, MD**

#### **University of Rome G. Marconi, Rome, Italy**

**Neuropeptides (NPs) and neurotransmitters are a heterogeneous group of soluble factors that make connections within the neuroendocrine and immune systems. NPs, including substance P (SP), vasoactive intestinal peptide (VIP), α melanocyte-stimulating hormone (α-MSH), and calcitonin gene-related peptide (CGRP), released by nerves that innervate the skin, can modulate the action of innate and adaptive skin immunity as well as the skin cells functions. Their role in several inflammatory skin diseases, such as atopic dermatitis, psoriasis, and vitiligo, and in the isotopic response has been reported. Further progress in understanding the various processes that modulate the interactions of the nervous and the skin immune system is essential to develop effective treatment for inflammatory skin conditions with neurogenic components and for understanding signs and symptoms in the isotopic response and, in general, in the control of global and regional immunity.**

# **Habit Reversal Therapy in Management of Itching in Dermatology Patients.**

**Pranaya Bagde, MD, DNB, MSc**

#### **DermaVue Skin and Hair Clinic, Thiruvanthapuram, Kerala, India.**

**Introduction: Habit reversal therapy (HRT) is a form of behavior therapy mainly used as a multicomponent treatment for tics and habits. The clinical intervention is that an old habit can be broken by replacing it with a new, more desirable habit. As itching is also a form of repetitive behavior, Habit reversal therapy can break the itch-scratch cycle in patients with itching and it can improve quality of life for dermatological patients.**

**Methods: The present pilot study was conducted in Psychodermatology clinic. Aim of the study was to assess the effects of habit reversal therapy in reducing the itching stimulus in patients with various dermatological diseases especially with intense pruritus. Visual analog scale (VAS) for itching response was maintained for the severity of itching in every visit.**

**Results: We observed 140 patients in the span of 2 years, with intense pruritus having different dermatological diseases mainly eczema and prurigo. We obtained positive results for the acceptance of HRT in 2-3 visits. There was significant reduction in scratching as observed by VAS and also marked improvement in skin manipulation and anxiety symptoms related to itching. Reductions generally were maintained at one to three month follow-up. Also the dose of systemic antihistaminics could be reduced. We found greater treatment compliance by the patients for their skin disorder too.**

**Conclusion: We recommend HRT as an adjuvant therapy for management of itching in dermatological diseases. Further studies are necessary to prove the efficacy of the interventions.**

# **Introducing “SkinMinder”: A Behavioral-Therapy App for Itch, Skin-Picking, and Other Repetitive Habits**

**Darlina Liu, Prag Batra, Evan Rieder MD**

#### **New York University School of Medicine, New York, NY USA**

**About half of all patients with skin disease report itch. Besides reducing quality of life, itch plays a large role in the pathogenesis of skin diseases via the “itch-scratch” cycle. Though management of itch has focused on treatment of the underlying skin condition, little emphasis has been placed on the management of associated scratching. Behavioral-modification therapies and patient-education programs have shown promise in reducing scratching and improving patients’ skin condition. Unfortunately, these treatments are not widely accessible. We are creating “SkinMinder,” a mobile-phone application, to teach people with pruritic skin disease how to manage itching and scratching through standard principles of behavioral therapy. Users are guided through a curriculum consisting of educational videos, exercises, and behavior tracking tools that help them develop awareness of scratching, detect triggers, and ultimately change their behaviors. As users complete the program, the app will return this data to the researchers to evaluate efficacy. We hope that such a program, if successful, can become a trusted resource and a novel tool in the patient’s pocket and in the busy dermatologist’s armamentarium.**

# **DSM 5 Equivalents of Current Psychocutaneous Diseases:**

**Ladan Mostaghimi, MD**

#### **University of Wisconsin, Madison, WI, USA**

**Considering body and mind as one and introducing integrative approaches to patients and diseases, demands common language between physicians of different specialties.**

**Currently Psychocutaneous entities have multiple names and different diagnostic criteria in dermatology literature. These are not necessarily the same entities recognize in psychiatric literature. Not having a common language causes great confusion and lack of uniformity in research and treatment approaches.**

**Integrating the different terminologies in dermatology and psychiatry literature and having a uniform classification will help patients’ care and research.**

# **Noxious Nocebos in Dermatology**

**Philip D. Shenefelt, MD**

#### **University of Southern Florida, Tampa, FL, USA**

**Negative expectations on the part of the patient or the dermatologist can negatively influence treatment responses resulting in the nocebo effect. For example, reciting to the patient a list of possible adverse effects of a medication or procedure to a suggestible patient may result in a nocebo response. The nocebo effect can impede patient compliance, the healing process, and treatment responses. The biological bases of both the placebo effect and the nocebo effect are beginning to be elucidated. Some individuals may be genetically more predisposed to the nocebo effect. How the dermatologist approaches the patient and what language and intonation and body language the dermatologist uses can promote either the placebo effect or the nocebo effect. Examples of key phrases to avoid and to use are included. The first duty of the dermatologist is to do no harm.**

# **CASE REPORT OF SANDS-LIKE DYSESTHETIC SYNDROM**

**Dimitre Dimitrov, MD 1 and Medhat Elsabbahy, MD 2**

**1** Dermatology, PMW Al Mafraq and Sheikh Khalifa Medical City, Abu Dhabi, UAE

**2** Behavioral Science Pavilion, Sheikh Khalifa Medical City, Abu Dhabi, UAE

**Introduction**

**Numerous examples can be found in medical literature regarding psychological deviations of patients after general anesthesia. Most of them have a short duration and the reason usually remains unclear.**

**Objective**

**To present an uncommon case of sands-like dysesthetic syndrome, in 81 y old female patient developed after recovery from general anesthesia.**

**Case report**

**Herein, we are presenting uncommon case of 81 y old female patient developed unusual skin sensation, kind of tactile hallucination after general anesthesia. After she recovered from the anesthesia, she felt that she has sand on her hands. The sensation was so real that she tried every few seconds to brush the sands with her hands.**

**Conclusions**

**We believe that the communication and follow up of similar cases in collaboration between dermatologist and psychiatrist may be highly needed**

# **Integrated Behavioral Healthcare in Dermatology? A Co-Located Care Pilot Research Study**

**Kristina Gorbatenko, PhD**

#### **University of Wisconsin-Stout**

**Presentations during previous APMNA meetings discussed why we need more Psych care (2016); cost effectiveness of such care (2015); and how dermatology clinics could begin addressing psychosocial care (2017) through less intensive approaches. This year presenting information on development of a co-located BH care program. Specifically, a co-located behavioral healthcare pilot program was developed for implementation in hair disorder clinics within the Department of Dermatology at the University of Minnesota.**

**Pilot program development was a collaborative multi-institution team effort, consisting of a dermatologist, a health psychologist, research coordinators and the National Alopecia Areata Foundation CEO. The pilot program is scheduled for implementation in April, 2018, pending grant and multi-institution IRB approval.**

**Goals of the pilot are threefold: assessing hair-loss patient need and desire for psychosocial care offered during dermatology appointments, determining the feasibility of offering such care in a busy ‘real-world’ dermatology clinic, and measuring initial patient outcomes.**

**Presentation will introduce integrated behavioral healthcare formats and discuss their general applicability to dermatology clinics. Specific pilot program development efforts will be discussed, and insights and lessons learned shared, including how to 1) establish a behavioral healthcare pilot program in a busy dermatology clinic, 2) assess the feasibility of the services and 3) gather preliminary clinical efficacy data.**

# **Factitious Disorders in Children: A Clinical and Therapeutic Review**

**Aleksandra Kobusiewicz, MD**

**Mohammad Jafferany, MD, FAPA**

#### **University of Lodz (Poland) and Central Michigan University (Michigan)**

**Factitious disorders are self-inflicted lesions produced by dominant hand on different body parts. They are most challenging in terms of diagnosis and management. They are often misdiagnosed. The prevalence ranges from 0.5-2%. Majority of children and adolescents who engage in self-injurious behaviors do not intend to commit suicide, instead they use their self-injurious behavior as an appeal for help or a non-verbal form of communication. There is considerable lack of awareness about child and adolescent population intentionally producing symptoms and this unique group has remained under-reported. There have been reports that many children with factitious disorders also suffer from other psychiatric disorders, particularly depression and borderline personality traits. High index of suspicion on provider’s part is a key to diagnosis. Confrontation to explore the underlying psychosocial conflicts does not work well, however, gentle, nonjudgmental, and empathetic approach often works and it helps develop therapeutic rapport. Along with dermatological care, psychopharmacological interventions and psychotherapeutic techniques have proven helpful in this population.**

# **Confidence in Diagnosis and Management of Psychodermatological Problems Among Dermatologists and Psychiatrists**

**Vijaytha Muralidharan, MD**

#### **University Hospitals Birmingham, UK**

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**Psychodermatology remains a niche sub-specialty in the United Kingdom (UK), with very few dedicated services available for patients with such problems. Despite this, up to 85% of dermatology patients say that psychosocial aspects of their skin disease are a major component of their condition, indicating an enormous unmet need.1 Our perception is that general dermatologists and psychiatrists may lack confidence in diagnosing and managing patients with psychodermatological problems, the vast majority of whom will not be cared for in a specialist service. To explore this hypothesis, we designed and distributed an online survey asking both dermatologists and psychiatrists about their levels of confidence in the diagnosis and management of several common psychodermatological presentations. Of 116 responses received, 67 were from dermatologists (38 consultants and 29 trainees/staff grades/associate specialists) and 47 from psychiatrists (28 consultants and 19 trainees/staff grades/associate specialists), with 2 responders undisclosed. 95/116 (82%) respondents were UK-based with the remainder located in Australia, New Zealand and the USA. Only 11 respondents declared a specialist expertise in psychodermatology.**

**Confidence levels for diagnosis were highest for delusional infestation (DI), with 88/116 (76%) respondents stating that they were ‘confident’ or ‘very confident’ in making this diagnosis. By contrast only 43/116 (37%) felt ‘confident’ or ‘very confident’ in diagnosing skin-related somatization disorders (such as psychogenic pruritus or burning red face syndrome). Confidence levels for managing patients with psychodermatological problems were much lower for all conditions. The highest was again for those with DI, where 54/116 (47%) were ‘confident’ or ‘very confident’ in managing this condition. Only 29/116 (25%) said the same for managing those with skin-related somatization disorders, while the corresponding results for dermatitis artefacta, body dysmorphic disorder, skin picking disorder and trichotillomania were 26%, 30%, 36% and 36% respectively. These results show that at best, one quarter of an undifferentiated group of dermatologists and psychiatrists lack confidence in diagnosing the paradigm psychodermatological condition of DI, with over half feeling uncomfortable in instituting appropriate management. This highlights the complexity of psychodermatological practice, the scope for further education among both dermatologists and psychiatrists, and the need to urgently expand specialist service provision in this field.**

# **Clinical Characteristics of Pain and Pruritus in Hidradenitis Suppurativa Patients.**

**Łukasz Matusiak, Justyna Szczęch, Karolina Kaaz, Edyta Lelonek, Jacek C. Szepietowski**

#### **Wroclaw Medical University, Poland**

**Background: Recent insight into the histopathological course of events during disease progression in hidradenitis suppurativa (HS) reported the increase of the mast cells in all stages of HS including perilesional skin. Mast cells produce and secrete a variety of inflammatory mediators, mainly histamine. Their peripheral effects are responsible for the signs and symptoms observed in various skin diseases, such as cutaneous swelling and pruritus.**

**Objectives: This study was undertaken to evaluate the pruritus and pain among hidradenitis suppurativa patients.**

**Material and methods: The study group consisted of 103 (50 females, 53 males) HS patients with the mean age of 35.6 ± 13.2 years. The disease severity was assessed as 38.0 ± 36.5 points, 9.2±4.6 points and 42/47/14 according to HSS (Hidradenitis Suppurativa Score), HSSI (Hidradenitis Suppurativa Severity Index) and Hurley I/II/III staging, respectively. Pruritus and pain intensity were evaluated with visual analogue scale (VAS), numeric rating scale (NRS) and a 4-item Itch Questionnaire. DLQI was also implemented to assess the QoL issues. Moreover, various clinical features of pruritus (including localization, quality, descriptors) and the most common factors responsible for its aggravation or alleviation were examined.**

**Results: The pain within last three days before examination was reported among 77.5% of HS patients, whereas pruritus was observed in 41.7% individuals. The mean pain intensity was assessed as 4.9±2.4 points (NRS) and 4.6±2.5 points (VAS). The mean pruritus severity was evaluated as 4.3±2.1 points, 3.9±2.2 points and 4.6±1.9 points (for NRS, VAS and 4-item Itch Questionnaire, respectively). The majority of patients described their itch as burning (46.5%), stinging (25.6%) or tickling (18.6%). The pain and pruritus intensity were correlated positively between each other (p<0.01), however co-occurrence of pain and pruritus at one location in the same time was assessed as 59.5%. With reference to pain, it was distributed quite equally between armpits, inguinals, perianal area or buttocks (23-34% for each region). Pruritus was observed predominantly in armpits (44% and 47% for right and left armpit, respectively). The most common factors exacerbating itch intensity were increased sweating, heat and physical activity. Although both pain and pruritus negatively influenced QoL assessed with DLQI (p<0.01), the pain was reported as the most troublesome symptom of HS, consecutively exceeding exudation, pruritus, appearance and smell. Nonetheless, the pruritus was irritating (62.8%) or burdensome (46.5%) for the majority of patients with HS (16.8% found it unbearable).**

**Conclusions: In patients with HS, in addition to pain, the pruritus of mild-to-moderate intensity is a common HS-associated symptom that adversely affects patients’ QoL.**

# **Quality of Life in Dermatology: Validation of Measurement.**

**Yanina Kutasevych, Valeriia Matiushenko, Оleksandra Havryliuk**

#### **Institute of Dermatology and Venerеology of National Academy of Medical Sciences of Ukraine, Kharkiv, Ukraine**

**Introduction: The prevalence of skin disease is very high worldwide, causing extensive damage to people’s lives and productivity. But skin disease rarely kills and so is often ignored and dermatology services under resourced. A major challenge over the last 30 years has been to develop methods to measure the impact of skin disease on the individual and on society. Skin disease can affect virtually every aspect of a person’s life including the psychoemotional state of a person. Measurement of the impact of skin disease on health-related quality of life can be with validated standard questionnaires.**

**Materials & Methods: 263 patients (age range 19-69 years) with chronic skin disease have been examined for 2017. Particularly, among them, there were 146 patients with psoriasis, 51 with eczema, 37 with acne, 22 with atopic dermatitis, 7 with alopecia areata. All patients were evaluated quality of life.**

**Results: People with chronic skin disease were interviewed to find out the patients’ perspective on how their lives were affected. The main areas were symptoms and feelings, daily activities, social activities, personal relationships and work or study. Patients with chronic skin diseases were less socially active. 37 % of people avoid going swimming, 64 % - avoid to visit saunas. Sporting activities are often avoided, often because of a desire not to reveal abnormal skin to strangers, for example in changing rooms – 62 %. The symptoms experienced are itchiness, soreness, pain and stinging – 38 %. These symptoms often lead to sleep disturbance and resulting tiredness – 29 %. People frequently report feeling embarrassed and self-conscious and these feelings contribute to changes in behavior with family and friends – 89 %. Social and leisure activities are altered by skin disease, as well as the ability to look after the home or undertaking simple basic activities such as shopping – 58 %. In addition the treatment for the skin disease itself often added an extra burden because of the time needed to apply ointments and because of resulting messiness and soiling of clothes, furniture and office equipment – 87 %.**

**Conclusions: Skin disease can have a profound psychological impact on a person and the individual’s personality will shape their response to having abnormal skin. There is therefore an interrelationship between the psychological makeup of a patient and the overall impact of the skin disease on the resulting impact of the disease on their life quality. Eventually understanding of this contributes to improve the quality of care.**

Exposure of Murine Langerhans Cells (LCs) to IL-6 Biases Antigen Presentation Toward an IL-17A Response.

**Wanhong Ding, Jimmy Lam, Lori L. Stohl and Richard D. Granstein**

#### **Weill Cornell Medicine, New York, NY USA**

**Our laboratory has reported that exposure of endothelial cells (ECs) to the neuropeptide calcitonin gene-related peptide endows ECs with the ability, acting as bystanders, to bias the outcome of LC antigen presentation to responsive T cells away from Th1 responses and towards Th17 responses. Experiments indicate that induced IL-6 production by ECs mediates most of this effect. To determine whether IL-6 action on LCs alone or T cells alone is sufficient for this phenomenon, we exposed epidermal BALB/c LCs or, separately, T cells from DO11.10 mice (BALB/c background; DO11.10 mice have T cell receptor peptides engineered to respond to a fragment of chicken ovalbumin, cOVA323–339) to IL-6 or medium alone in culture for 3 hours. Then, all cells were washed x 4. IL-6- exposed or medium-exposed LC were cultured with DO11.10 T cells not exposed to IL-6 along with antigen. Supernatants were harvested 72 hours later and analyzed by ELISA for cytokine content. Exposure of LCs to IL-6 led to significantly enhanced production of IL-6 and IL-17A with significantly reduced IFNγ production. When analogous experiments were set-up treating responding T cells with IL-6 instead of LCs, no effect was observed. In a preliminary experiment, exposure of LCs to monoclonal anti-CD126 antibodies before and during treatment with IL-6 significantly inhibited enhancement of IL-17A and IL-6 production by responding DO11.10 T cells while having no effect on the level of T cell responses in the absence of IL-6 treatment, suggesting that presentation of IL-6 by the IL-6 receptor alpha chain may be important for this effect. These experiments show that exposure of LCs to IL-6 polarizes the outcome of antigen presentation to responsive T cells away from an IFNγ response and toward an IL-17A response. This finding may have implications for a greater understanding of the pathophysiology of inflammatory skin disorders.**